

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. - 23. (canceled)

24. (currently amended) A user configurable universal media processing system arranged to receive and process any of a number of type of digital data, comprising:

a memory unit for storing the digital data including video digital data and audio digital data being processed by said media processing system;

a number of distributed configurable media processing elements (MPE) suitably arranged to provide distributed processing of said digital data each being coupled to the memory unit thereby enabling selected portions of the digital data to be shared and processed amongst the media processing elements; elements, wherein at least one of said configurable MPEs is dynamically configured to act, at least in part, as a control processing element suitably arranged to control the distribution of said digital data between some or all of the MPEs, schedule tasks for the MPEs, wherein each of the distributed MPEs process a selected portion of the digital data in concert with the other MPEs thereby increasing the overall speed and efficiency of the media processing system, and provide a control signal to selected ones of the MPEs wherein said control signal causes the selected MPEs to reconfigure in order to process a selected digital data type; and

a number of communication busses suitably arranged to interconnect the memory unit, the number of media processing elements and the control processing element, whereby control signals/commands and data are transferred throughout the media processing system on

separate ones of the communications busses thereby increasing the overall processing power of the media processing system.

25. (previously presented) A system as recited in claim 24 further comprising:
a data stream parser unit coupled to the memory unit arranged to parse the digital data into a number of sub-data streams each being suitable for processing by selected MPEs.

26. (previously presented) A system as recited in claim 24, wherein each of the MPEs is a single instruction stream, multiple data stream (SIMD) general purpose very long word (VLIW) RISC processor capable of operating independently of the other MPEs.

27. (previously presented) A system as recited in claim 24 wherein, based upon a signal provided by the processor control element, selected ones of the MPEs cooperatively perform a particular task.

28. (currently amended) A system as recited in claim 27, wherein when the particular task is selected from a group that includes graphics processing, database searching, numerical processing, and video processing, and the like.

29. (previously presented) A system as recited in claim 28, wherein the digital data is stored on an external medium in a format consistent with a particular external medium.

30. (previously presented) A system as recited in claim 29, wherein the external medium includes a compact disc (CD), a laser disc (LD), a digital versatile disc (DVD) and wherein the respective formats include a compressed audio format, a first type compressed video and first

type compressed audio format, and a second type compressed video format and a second type compressed audio format such that the universal media processor identifies the particular format and reconfigures selected ones of the MPEs accordingly in order to successfully process the corresponding digital data.

31. (previously presented) A system as recited in claim 29 wherein when the particular task is processing an MPEG-2 video stream, the process element controller directs selected MPEs to decode the MPEG-2 data, other selected MPEs to generate full motion color images based upon the decoded MPEG-2 data, other MPEs to generate audio streaming data.

32. (previously presented) A system as recited in claim 24, wherein the memory device includes a main system memory, and wherein the number of busses includes,

a main system bus coupled to the main system memory;

a supplemental bus separate from the main system bus arranged to communicate with the main system memory capable of providing linear data transfers; and

a communication bus used to transfer data packets between selected ones of the MPEs and/or provides a link between the MPEs and a selected one of a number of peripheral devices.

33. (currently amended) A method of processing digital data by a media processing system, comprising:

receiving the digital data;

determining a digital data format associated with the received digital data;

configuring selected ones of a number of configurable media processing elements (MPE) in order to process the digital data in the appropriate format;

dynamically configuring at least one of said configurable MPEs to act, at least in part, as a control processing element suitably arranged to control the distribution of said digital data between some or all of the MPEs, schedule tasks for the MPEs, wherein each of the distributed MPEs process a selected portion of the digital data in concert with the other MPEs thereby increasing the overall speed and efficiency of the media processing system;
~~processing the digital data by the configured selected ones of the number of MPEs;~~
and
outputting the processed digital data.

34. (previously presented) A method as recited in claim 33, further comprising:
storing the received digital data in a memory device coupled to each of the MPEs.
35. (previously presented) A method as recited in claim 33, further comprising:
providing a control signal to selected ones of the MPEs wherein said control signal causes the selected MPEs to reconfigure in order to process the digital data in the determined format.
36. (previously presented) A method as recited in claim 35, further comprising:
parsing the digital data; and
scheduling tasks for the MPEs based upon processing of the parsed digital data, wherein each of the distributed MPEs process a selected portion of the parsed digital data in concert with the other MPEs thereby increasing the overall speed and efficiency of the media processing system.
37. (previously presented) A method as recited in claim 36, further comprising:

providing a number of communication busses suitably arranged to interconnect the memory unit, the number of media processing elements and a control processing element, whereby control signals/commands and data are transferred throughout the media processing system on separate ones of the communications busses thereby increasing the overall processing power of the media processing system.

38. (currently amended) A method of as recited in claim 33, further comprising:

wherein said digital video data is compressed in a first standardized format, processing said digital data that includes said first standardized format compressed video data to produce compressed video images and image data;

decoding said first standardized format compressed video images to generate full motion video pixel data by selected ones of the MPEs;

sharing said a DRAM between said MPEs; and producing a full motion video signal from said full motion video pixel data, wherein the selected ones of the MPEs used for decoding the first standardized format compressed video images is adapted for reconfiguration to decode digital data including data that is compressed in a second standardized format.

39. (currently amended) Computer program product for processing digital data by a media processing system, comprising:

computer code for receiving the digital data;

computer code for determining a digital data format associated with the received digital data;

computer code for configuring selected ones of a number of media processing elements (MPE) in order to process the digital data in the appropriate format;

computer code for dynamically configuring at least one of said configurable MPEs to act at least in part, as a control processing element suitably arranged to control the distribution of said digital data between some or all of the MPEs, schedule tasks for the MPEs, wherein each of the distributed MPEs process a selected portion of the digital data in concert with the other MPEs thereby increasing the overall speed and efficiency of the media processing system;

computer code for processing the digital data by the configured selected ones of the number of MPEs;

computer code for outputting the processed digital data; and

computer readable medium for storing the computer code.

40. (previously presented) Computer program product as recited in claim 39, further comprising:

storing the received digital data in a memory device coupled to each of the MPEs.

41. (previously presented) Computer program product as recited in claim 39, further comprising:

computer code for providing a control signal to selected ones of the MPEs wherein said control signal causes the selected MPEs to reconfigure in order to process the digital data in the determined format.

42. (previously presented) Computer program product as recited in claim 41, further comprising:

computer code for parsing the digital data; and

computer code for scheduling tasks for the MPEs based upon processing of the parsed digital data, wherein each of the distributed MPEs process a selected portion of the parsed digital data in concert with the other MPEs thereby increasing the overall speed and efficiency of the media processing system.

43. (previously presented) Computer program product as recited in claim 42, further comprising:

providing a number of communication busses suitably arranged to interconnect the memory unit, the number of media processing elements and a control processing element, whereby control signals/commands and data are transferred throughout the media processing system on separate ones of the communications busses thereby increasing the overall processing power of the media processing system.

44. (currently amended) Computer program product as recited in claim 43, further comprising:

wherein when said digital video data is compressed in a first standardized format, computer code for processing said digital data that includes said first standardized format compressed video data to produce compressed video images and image data;

computer code for decoding said first standardized format compressed video images to generate full motion video pixel data by selected ones of the MPEs;

computer code for sharing said a DRAM between said MPEs; and
computer code for producing a full motion video signal from said full motion video pixel data, wherein the selected ones of the MPEs used for decoding the first standardized format compressed video images is adapted for reconfiguration to decode digital data including data that is compressed in a second standardized format.